

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mitsuru UEDA et al.	Art Unit: 2841
Application No.: 10/596,097	
Confirmation No.: 1870	Examiner: X. Chen
Filing or 371(c) Date: May 30, 2006	
Title: LAMINATED CERAMIC ELECTRONIC COMPONENT AND MANUFACTURING METHOD THEREFOR	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated July 12, 2010 and the Advisory Action dated October 1, 2010, please consider Applicant's arguments and remarks concerning the rejection issued in the Office Action dated July 12, 2010 and the arguments made in the Advisory Action dated October 1, 2010.

Claims 14-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai (U.S. 2001/0026435) in view of Murai et al. (U.S. 6,285,116) and Alcoe (U.S. 7,087,846). Applicant respectfully traverses the rejection of Claims 14-20.

Claim 14 recites, in part:

...
laminating a plurality of ceramic sheets such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate; wherein

...
the area of the second land is greater than the area of the first land.

The Examiner alleged that Sakai teaches all of the features recited in Applicant's Claim 14, except for the features of (1) simultaneously filling the conductive material in the hole during the step of screen printing the coil conductor pattern; and (2) the area of the second land is larger than the area of the first land. The Examiner further alleged that Murai et al. teaches the feature of simultaneously filling

the conductive material in the hole during the step of screen printing the coil conductor pattern, and that Alcoe teaches the feature of the area of the second land is larger than the area of the first area.

In the Response to Arguments section on page 2 and 3 of the Office Action dated July 12, 2010, the Examiner alleged:

Since the main reference of Sakai disclose[s] laminating a plurality of ceramic sheets (the ceramic sheets are laminated together [0017]) such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets (the connecting land is positioned at an end of the line conductor, i.e., the end of the line conductor is connected to the via-hole conductor [0037], fig. 2) to obtain a laminate (the ceramic green sheets are laminated together [0017]), Alcoe does not need to teach the same limitation.

On the Continuation Sheet of the Advisory Action dated October 1, 2010, the Examiner further alleged:

1) As stated in the rejection that Sakai disclose[s] "the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets" (fig. 2, the connecting land is positioned at an end of the line conductor, i.e., the end of the line conductor is connected to the via-hole conductor [0037]) to obtain a laminate (fig. 2, the ceramic green sheets are laminated together [0017]); and Alcoe teaches "the area of the second land (25, fig 1 and fig. 1A) is larger than the area of the first land (29, fig 1 and fig. 1A)."

2) The reference of Alcoe is used only for teach "the area of the second land is larger than the area of the first land", and Alcoe does not necessary to teach to "the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets" or the other limitations in the claim, since the main reference of Sakai already disclosed the limitation (See response to the arguments B. 1, above).

Applicant respectfully disagrees with the Examiner's allegations.

Contrary to the Examiner's allegations, Sakai and Alcoe, applied alone or in combination, clearly fail to teach or suggest the features of "laminating a plurality of ceramic sheets such that **the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate**," wherein "**the area of the second land is greater than the area of the first land**" (emphasis added) as recited in Applicant's Claim 14.

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Applicant's Claim 14 requires both of the features of (1) "laminating a plurality of ceramic sheets such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate," and (2) "the area of the second land is greater than the area of the first land." That is, Claim 14 requires an arrangement in which a first land having a smaller area in one ceramic sheet is directly and electrically connected to a second land having a larger area in another ceramic sheet through a via hole.

The Examiner acknowledged that Sakai fails to teach or suggest the feature of "the area of the second land is greater than the area of the first land" as recited in Applicant's Claim 14, and instead, Sakai clearly teaches that all of the lands 29 have the same area. Thus, at best, Sakai may arguably teach the features of laminating a plurality of ceramic sheets such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate, wherein the area of the second land is the same as the area of the first land, and most certainly cannot possibly teach or suggest the feature of "laminating a plurality of ceramic sheets such that **the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land** in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate," wherein "**the area of the second land is greater than the area of the first land**" (emphasis added) as recited in Applicant's Claim 14.

The Examiner alleged that Alcoe teaches the feature of a conductor pattern 15 that includes a first land 29 and a second land 25 at opposed ends of the conductor pattern 15, wherein the area of the second land 25 is greater than the area of the first land 29. However, as shown in Figs. 1A and 2A of Alcoe, the first land 29 of the conductor pattern 15 is directly and electrically connected by the via hole 19 to the first land of the conductor pattern 15. That is, at best, Alcoe teaches the feature of laminating a plurality of ceramic sheets such that the first land 29 of the conductor pattern 15 having an area smaller than an area of the second land 25 in one of the plurality of ceramic sheets is directly and electrically connected to the first land 29 of the conductor pattern 15 having an area smaller than an area of the second land 25 in another of the plurality of ceramic sheets through the via hole 19 formed in the one of the plurality of ceramic sheets to obtain a laminate.

Alcoe fails to teach or suggest that the first land 29 on one of the ceramic layers could or should

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be directly and electrically connected to the second land 25, which has an area greater than that of the first land 29, on another one of the ceramic layers through the via hole 19, or that there would have been any reason or incentive whatsoever to arrange the first and second lands 29 and 25 such that the first land 29 on one of the ceramic layers is directly and electrically connected to the second land 25 on another one of the ceramic layers through the via hole 19. Instead, in each embodiment of Alcoe that allegedly includes a first land and a second land that has an area greater than that of the first land, the first land in one ceramic layer is always directly and electrically connected to the first land in another ceramic layer, and is never directly connected to the second land.

Thus, Alcoe clearly fails to teach or suggest the features of "laminating a plurality of ceramic sheets such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate," wherein "the area of the second land is greater than the area of the first land" as recited in Applicant's Claim 14.

Therefore, at best, Sakai teaches that lands having the same area in different ceramic sheets may be directly and electrically connected to one another through a via hole and Alcoe teaches that a land having smaller area in one ceramic layer may be directly and electrically connected to a land having a smaller area in another ceramic layer through a via hole. Neither Sakai nor Alcoe teaches or suggests that a land having a smaller area in one ceramic layer could or should be directly and electrically connected to a land having a larger area in another ceramic layer through a via hole. However, somehow, without any teaching, suggestion, incentive, or other evidence of record, the Examiner has concluded that such an arrangement would have been obvious in view of the alleged teachings of Sakai and Alcoe.

The Federal Circuit has consistently held that the prior art reference must combine or arrange the limitations in the same way as in the claimed invention without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the prior art reference. *Net Moneyin, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008); *see also In re Arkley*, 455 F.2d 586, 587-88 (C.C.P.A. 1972). Since neither Sakai nor Alcoe teaches or suggests arranging the first land and the second land having an area greater than the first land such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to

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obtain a laminate as recited in Applicant's Claim 14, Applicant respectfully submits the Examiner has committed clear legal error and has failed to establish a *prima facie* case of obviousness in the rejection of Claim 14 over Sakai in view of Murai et al. and Alcoe

The Examiner is reminded that prior art rejections must be based on evidence. *Graham v. John Deere Co.*, 383 U.S. 117 (1966). The Examiner is hereby requested to cite a reference in support of his position that it was well known at the time of Applicant's invention to laminate a plurality of ceramic sheets such that the first land in one of the plurality of ceramic sheets is directly and electrically connected to the second land in another of the plurality of ceramic sheets through the via hole formed in the one of the plurality of ceramic sheets to obtain a laminate, wherein the area of the second land is greater than the area of the first land as recited in Applicant's Claim 14.

Therefore, Applicant respectfully submits that Sakai, Murai et al., and Alcoe, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicant's Claim 14.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Sakai in view of Murai et al. and Alcoe.

In view of the foregoing remarks, Applicant respectfully submits that Claim 14 is allowable. Claims 15-20 depend upon Claim 14, and are therefore allowable for at least the reasons that Claim 14 is allowable. The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Dated: October 7, 2010

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